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Extended Essay in **Economics**

Points: 36/36

Grade: A

Note: This extended essay serves as an example essay that is meant to inspire you in your work with your own extended essay. We hope that it is used for identifying elements that are good to include in order to obtain the grade you strive for. Any plagiarism is strictly forbidden.

Table of content

1	Introduction	1
1.1	Goal.....	1
1.2	Method	1
1.3	Delimitation.....	2
1.4	Result	2
1.5	Outline.....	2
2	Economic theory	3
2.1	Perfect competition and a perfectly competitive market.....	3
2.1.1	Homogenous goods.....	3
	Many buyers and sellers.....	3
2.1.3	No barriers of entry/exit.....	4
2.1.4	Perfect knowledge.....	4
2.2	Realism of the market structure	4
3	The inductive approach.....	5
3.1	Selection of consumers, retailers and book/CD titles.....	5
3.1.1	Selection of consumers.....	5
3.1.2	Book/CD titles	6
3.1.3	Retailers.....	7
3.2	Data collection methodology.....	7
3.2.1	Homogenous goods.....	8
3.2.2	Many buyers/sellers	8
3.2.3	No barriers of entry/exit.....	8
3.2.4	Perfect knowledge.....	9
4	Presentation of data, analysis and results	10
4.1	Homogenous goods	10
4.2	Many buyers/sellers.....	10
4.2.1	Presentation of data	10
4.2.2	Analysis and empirical results.....	10
4.3	No barriers of entry/exit.....	12
4.3.1	Presentation of data	12
4.3.2	Analysis and empirical results.....	13
4.4	Perfect knowledge	14
4.4.1	Presentation of data	14
4.4.2	Analysis and empirical results.....	15
5	Conclusion.....	16
6	Evaluation and errors	17
7	Bibliography.....	18
7.1	Books	18
7.2	Papers.....	18
7.3	Internet.....	18
8	Appendix	20
8.1	Appendix A - Definitions.....	20
8.2	Appendix B - Standard deviation.....	21
8.3	Appendix C – Inquiry buyers	21
8.4	Appendix D – Inquiry sellers.....	22
8.5	Appendix E – Standard interview questionnaire regarding Barriers of entry/exit.....	23
8.6	Appendix F – Book and CD retailers.....	23
8.7	Appendix G – CD Titles	24
8.8	Appendix H – Book titles	24
8.9	Appendix I – Prices for books, conventional and internet	25
8.10	Appendix J – Prices for CDs, conventional and internet	25
8.11	Appendix K – Calculation of Standard Deviation	26
8.12	Appendix L – Average Standard deviation	27
8.13	Appendix M – Chat communities.....	27

1 Introduction

The Internet is a nearly perfect market because information is instantaneous and buyers can compare the offerings of sellers worldwide. The result is fierce price competition, dwindling product differentiation, and vanishing brand loyalty.

Robert Kuttner, Business Week, May 11, 1998

The quote above is one of several examples where *the Internet* and business conducted through the Internet is considered to resemble a *perfectly competitive market*. These ideas are based on the breakthrough of *E-commerce* in the mid 1990's.

However, it can be questioned whether the Internet is such a perfect market as Kuttner and others suggest. In a perfectly competitive market situation, zero economic profit is expected¹, and if this is the case, why do investors looking for economic profit tend to invest in companies such as Amazon.com and CDnow.com²?

1.1 Goal

As we have entered the 21st Century with its developing information technology, people have increased their use of the Internet for purchasing.³ Therefore, it is interesting to investigate if the *Internet-based market* is more competitive than the *conventional retail market*.

The following **research question and hypothesis** has been developed in order to determine which market is the most competitive in a strict economic sense:

To what extent are the main criteria of the perfectly competitive market structure (perfect competition theory) fulfilled on the conventional retail market and the Internet-based retail market for books and Compact Discs ("CD"s)?

The hypothesis is that the Internet-based market for books and CDs better fulfils the main criteria.

The goal of this essay is to answer the research question and to judge whether the above mentioned hypothesis holds.

1.2 Method

In order to answer the research question, a two-step *inductive approach* rather than a *deductive approach*, from primary sources has been used.

Firstly, the selected markets are compared to the criteria of a *perfectly competitive market*. This is conducted through interviews and statistical price data analysis. Secondly, the derived results are set in comparison between the two selected markets. In order for the hypothesis to hold, the Internet-based retail market should most closely match the criteria of perfect competition. For the analysis, primary resources have been used in order to avoid distortion of information.

¹ Grant, S.J. (2000), Stanlake's Introductory Economics Seventh Edition, Pearson Education Limited: Essex CM20 2JE p385

² Brynjolfsson, Erik and Smith, Michael D. (1999) Frictionless commerce p1

³ Internet: <http://www.scb.se/publkat/transporter/it/it.pdf> 2005-10-15

1.3 Delimitation

The research question has been narrowed down through geographical selection, a short time period and few products in order to achieve depth in the presented material and results

SELECTED MARKETS

This essay chooses to examine markets based on business to consumer sales. The inspected sectors are books and CDs, which are selected due to the products' homogeneous nature which allows for less distorted data. The sales channels chosen are conventional retailers and *Internet-based retailers*.

SELECTED CUSTOMERS

The focus has been set on one-time shoppers that e.g. are looking for a Christmas gift. This group is believed to be less affected by loyalty programmes and attachment between buyers and sellers. Therefore the author has excluded conventional mail-order and book clubs. For further depth in the selection criteria please *see Chapter 6, Evaluation and errors*

SELECTED TIME PERIOD AND GEOGRAPHICAL LOCATION

The observations have taken place between July 2005 to December 2005 in the city of Malmö, Sweden. Furthermore, all non-Swedish retailers are excluded.

SELECTED ECONOMIC THEORY

A further delimitation is that economists mention a varied number of characteristics that are applicable to the theory of perfect competition. However the majority of the sources studied only mention four main characteristics⁴, which therefore have been selected. Furthermore, this essay does not intend to challenge the model of perfect competition.

1.4 Result

According to the investigation conducted it is established that the hypothesis holds and that the Internet-based retail market for books and CDs is the one that most closely matches the criteria of perfect competition.

1.5 Outline

Chapter 2 in this essay gives a brief overview of the selected economic theory. Chapter 3 describes the chosen method and Chapter 4 presents the data, findings and analysis of the investigation. The essay's conclusion is found in Chapter 5. Full questionnaires and raw data are found in the appendices.

In the body text of this essay, all concepts written in *italic* can be found in 'Definitions' in **Appendix A**

⁴ Characteristics that are supported by: Introductory Economics, written by B. Harrison, C. Smith and B. Davies. **p391** ; Economics, written by M. Parkin, M. Powell and K. Matthews **p956** ; Stanlake's Introductory Economics, written by S.J. Grant **p640** and Economics Second Edition, written by Alain Anderton **p149**

2 Economic theory

2.1 Perfect competition and a perfectly competitive market

Economists have developed a theory known as *The Theory of Perfect Competition*. This model is largely theoretical, but does provide a useful tool for economic analysis.⁵ A market that abides the theory is known as a perfectly competitive market and complies with the theory's four main characteristics:

1. **Homogeneous products**
2. **Many buyers/sellers**
3. **No barriers of entry/exit**
4. **Perfect knowledge of market conditions (price, supply/demand and actions)**

When assessing the competitiveness of a market, economists plot the characteristics of the observed real world market to the above-mentioned theoretical characteristics. The same method has been used in this essay.

The following sections describe the characteristics and key concepts more closely.

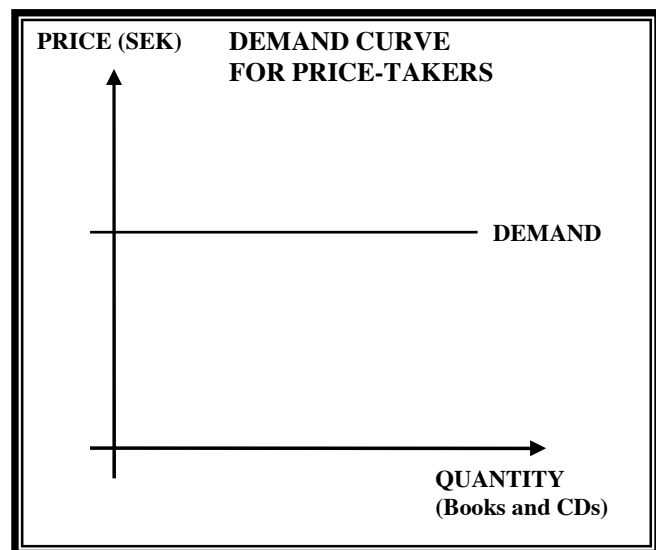
2.1.1 Homogenous goods

In a perfectly competitive market all products are homogenous (i.e. exactly the same as another). Neither branding nor advertising is used to differentiate the products from each other.⁶

2.1.2 Many buyers and sellers

A perfectly competitive market consists of a large number of buyers and sellers. The number must be so large that any one of them has an insignificant proportion of the market.⁷ Neither any buyer nor any seller is so large that they can influence the price – the price must be set by the market and is beyond any one's control.⁸ Both buyers and sellers are said to be '*price-takers*'.⁹ Price-takers are forced to accept the ruling market price. This makes the demand curve horizontal or perfectly elastic¹⁰ *see Figure 1*.

Figure 1 Demand curve for Price-takers¹¹



⁵ Grant, Stanlake's *Introductory Economics* p384

⁶ *ibid* p384

⁷ Internet: <http://www.businesssteps.co.uk/BusNet/Demand/Compete/c050a.htm> 2005-07-16

⁸ Grant, Stanlake's *Introductory Economics* p384

⁹ Anderton Allain, (1997), *Economics Second Edition*, Causeway Press Limited: Ormskirk, Lancs L39 5HP p149

¹⁰ *ibid.* p150

¹¹ *ibid.* p150

2.1.3 No barriers of entry/exit

If new players wish to engage in the market, or if an active player wants to leave, this should be possible without restrictions,¹² e.g. legal constraints, patents or large start-up costs. This further implies that there are no '*sunk costs*'. An example of a cost that is both an entry barrier and a sunk cost is an initial investment in a specialised machine that cannot be sold if the player wishes to leave the market. Advertisement is also a form of sunk costs, but only if the company cannot sell their trademark.¹³

2.1.4 Perfect knowledge

In a perfectly competitive market, both buyers and sellers are fully informed about the prices of every product of each firm in the industry at every moment and the actions of every other player.¹⁴ Should a firm try to charge a higher price than the prevailing market price, demand will drop to zero, since consumers will turn to competing companies.¹⁵ The theory assumes that all players are profit maximisers and that there is no incentive for a seller to sell below the market price.¹⁶

2.2 Realism of the market structure

Perfect competition does not exist in the real world as no market can fulfil all the theoretical criteria. However, there are some markets that come close, e.g. the market for wheat. There are many wheat producers in the world and none of them can be considered large enough to control the market price. Start-up costs are low and wheat can be considered a homogenous good and with modern information technology, knowledge is widespread and instantaneous, almost perfect. Another example is foreign exchange.¹⁷

¹² *ibid.* p149

¹³ Grant, Stanlake's *Introductory Economics* p385

¹⁴ Parkin, Michael, Powell, Melanie and Matthews, Kent (2000) *Economics fourth edition*, Pearson Education Limited: Essex CM20 2JE p.270

¹⁵ Grant, Stanlake's *Introductory Economics* p385

¹⁶ Internet: <http://www.businesssteps.co.uk/BUSNet/Demand/Compete/c050a.htm> 2005-07-15

¹⁷ Grant, Stanlake's *Introductory Economics* p.391

3 The inductive approach

In *Chapter 3*, this essay aims to describe how and why the data was gathered.

All data was gathered during the period July to December 2005 in Malmö, Sweden. The period was chosen to include the prelude to Christmas, where the author believes that both buyers and sellers are at a supply/demand information peak due to heavy advertising and enlarged demand. The geographical location was selected due to close proximity to the author's home and the presence of both conventional retailers and Internet-based retailers. The data was gathered so that a comparison of the two selected markets to the Theory of Perfect Competition could be done.

3.1 Selection of consumers, retailers and book/CD titles

3.1.1 Selection of consumers

This analysis assumes that the consumer

- i. is located in the city of Malmö.
- ii. is interested in buying a book/CD.
- iii. is purchasing the book/CD through conventional or Internet retailers. It is assumed, that due to faster and more reliable delivery, language barriers and consumer confidence that Swedish customers primarily use Swedish Internet retailers.

No outspoken consideration has been taken to age, sex and income, instead this essay believes that the consumers are self-categorised through the book/CD titles that the consumers select.

3.1.2 Book/CD titles

The type of titles and the number of titles were chosen to overbridge possible supply differences between the different types of retailers and possible demand differences among consumers.

CD TITLES:

Source	Type of titles	Number of titles selected	Target group
Current Billboard 200 chart ¹⁸	200 current top sellers, 2005-09-15	15	Mainstream listeners, teenagers and young adults
Billboard 200 Chart rewind – 5 years ago	200 top sellers January 2000	8	Mainstream listeners, consumers that were teenagers and young adults 5 years ago. The titles are known in the business as “slowrunners”
The author’s father’s selection		2	Classics. Known in the business as “Oldies but Goldies”
Total		25	

*Table I. Selected CD titles. Please see **Appendix G** for further specifications*

BOOKS:

For books, similar selection criteria were used. Carina Persson, salesperson at the conventional book retail store Akademibokhandeln selected five current bestsellers and five books considered as classics. Since Carina Persson is a professional this essay trusts her judgement in supplying an appropriate population. For further specifications, please **see Appendix H**.

¹⁸ Internet: <http://www.billboard.com/billboard/charts/bb200.jsp> 2005-08-20

3.1.3 Retailers

Based on the selected titles from above, the table below sets out the selected retailers

Product	Retailers	Number of titles investigated	Selection criterion
Books	4 (Conventional retailers in Malmö)	10	There are five large and well-known conventional book retailers in Malmö, selected through the Swedish yellow pages ¹⁹ . Of these, only four carried the selected titles
Books	5 (Swedish Internet-based)	10	The Swedish Internet-based book retailers were found through the websites of the Swedish Royal Library ²⁰ and “one to one” ²¹ . One to one is an alternative edition of “yellow pages”. According to these sources, only five Swedish-based internet retailers operate. All five carried the selected titles
CDs	5 (Conventional retail in Malmö)	25	The five conventional CD retailers were selected through the Swedish yellow pages. ²² Even though there are 24 retailers in Malmö, only 5 were able to supply the required price information
CDs	5 (Swedish Internet-based)	25	The Swedish Internet-based CD retailers were found through the “one to one” ²³ homepage. Five retailers met the requirements and all of these carried the selected titles

*Table II. Selected retailers. Please see **Appendix F** for further specifications*

When a retailer is mentioned in this essay, please *see Appendix F* for a description of their business.

3.2 Data collection methodology

To be able to answer the research question, data from the above mentioned retailers was collected. The aim of the investigation was to gather price information and characteristics of the consumers and retailers. The answers are found in **Chapter 4, Presentation of Data**.

¹⁹ Internet: www.gulasidorna.se search for ”bokhandlare” and “Malmö”
http://www.gulasidorna.se/query?what=yp&newSearch=1&searchRadio=simple&heading=bokhandlare&company_name=&geo_area=malm%F6&dir_area=&x=0&y=0 2005-08-13

²⁰ Internet: <http://www.kb.se/intboksv.htm> 2005-08-13

²¹ Internet: <http://www.121.nu/infosid/handel2.htm#bocke>. 2005-08-12

²² Internet: http://www.gulasidorna.se/query?what=yp&heading_exact=Musik+-+CD,+skivor,+kassettband+-+Detaljister&district_name=&district_type=&geo_area=malm%F6 2005-08-05

²³ Internet: <http://www.121.nu/infosid/handel2.htm#bocke> 2005-08-09

Fifteen individuals were interviewed per retail channel and per product, i.e. in total 60 people (30 is lower limit to ensure statistical reliability).²⁴ The interviewee was presented with an enquiry form (*see Appendix C*) and asked to choose an answer on scale from 1-5, where one is 'Do not agree' and five is 'Agree entirely'.

When investigating the conventional market, the process went smoothly. However, to reach people on the Internet was more difficult. After trying different methods, the "chat method" was eventually chosen. The terms of this method was to visit different Internet communities and find people that were buying books/CDs on the net and ask the questions in the enquiry form. For further details *see Appendix M*. The reader should keep in mind that when gathering information through chat-communities, the degree of truth is hard to investigate and the Internet's anonymity may lead to untruthful answers. *See Chapter 6 Evaluation and errors for further details.*

Below can be found which methods were used in investigating how well the four main criteria were matched in the two retail channels.

3.2.1 Homogenous goods

The first criterion for a perfectly competitive market is the Homogeneous goods criterion.

No data regarding the homogeneity of the goods was gathered. This, because a specific book or CD is the same irrespective of retailer. For further explanation, please *see Chapter 4, Data analysis and empirical results.*

3.2.2 Many buyers/sellers

On a market with a sufficient number of buyers/sellers, a perfectly competitive market, there should i) only be one market price and ii) all sellers are 'price-takers'.

To investigate i), the mathematical method called standard deviation was used, *see Appendix B* for details. Through this method, the price divergence from the mean could be determined. If perfect competition had existed, the mean should be the market price and the standard deviation zero, i.e. no divergence from the mean in any case. In the investigation, the more competitive market is the one with lowest standard deviation.

To investigate ii), the sellers were asked to what extent they are likely to change their price to follow a competitor, i.e. if they are price-takers or price-makers. The author chooses to utilise qualitative interviews for this investigation. An example of an asked question is: *"If one of the larger stores, which you consider a competitor, changes its price for a book/CD that you carry and believe will sell well during Christmas, will you follow suit?"*

The complete list of questions can be found in *Appendix D*. As a part of the qualitative interviews the seller motivated their answers, points of value are brought up in *Chapter 4, Data presentation and analysis.*

3.2.3 No barriers of entry/exit

To assess the third criterion the costs of setting up a conventional and an Internet-based retail store were investigated. One employee in conventional retail and two in Internet-based retail were asked, in in-depth qualitative interviews, about their views on barriers of entry/exit. An example of a question asked is: *"When starting up a conventional retailer, how*

²⁴ Ms. Helena Fahlstadius, former statistics student at Stockholm School of Economics. 2005-08-15.

difficult is it to get a well placed store location and how significant are the store costs?" The complete interview material is found in ***Appendix E***.

3.2.4 Perfect knowledge

For 'perfect knowledge', questions were posed concerning how much the sellers know about the buyers and vice versa. An example of a statement to which the buyer had to relate is: "*I know where it is cheapest to buy*". The sellers were also posed with statements, e.g. "*We are regularly keeping track of our competitors' prices*". The full enquiry form can be found in ***Appendix C and D***

4 Presentation of data, analysis and results

In *Chapter 4*, this essay will present the data obtained in the interviews mentioned above and the interpreted results from the data.

4.1 Homogenous goods

Since exactly the same products are sold both on the Internet and on the conventional market, no market is more in line with the criterion than the other. It is possible to verify that the book and CD titles are homogeneous as every selected title had its individual ISBN²⁵. If two books have the same ISBN they are per definition identical.²⁶

RESULT:

It cannot be evaluated through this criterion if the hypothesis holds as both markets sell the same, homogenous goods.

4.2 Many buyers/sellers

4.2.1 Presentation of data

To be able to find out if companies are ‘price-takers’, different prices for the ten Internet-based retailers and nine conventional retailers were gathered. These observations were used to calculate the standard deviation. The numerical results of this analysis can be found in *Appendix K*.

Two statements concerning the criteria “many buyers/sellers” were asked to the sellers as seen below. The results were:

Conventional Book and CD sellers						
Not Agree/ Agree (1-5)	1	2	3	4	5	Average answer
“If one of the larger stores, which you consider a competitor, changes its price for a book/CD that you carry and believe will sell well during Christmas, will you follow suit?”	5	2	2	0	0	1,66
“If three of the larger stores, which you consider competitors, changes its price for a book/CD that you carry and believe will sell well during Christmas, will you follow suit?”	1	6	2	0	0	2,11

Table III. Questions asked to conventional retailers.

Internet Book and CD sellers						
Not Agree/ Agree (1-5)	1	2	3	4	5	Average answer
“If one of the larger stores, which you consider a competitor, changes its price for a book/CD that you carry and believe will sell well during Christmas, will you follow suit?”	0	0	7	0	0	3
“If three of the larger stores, which you consider competitors, changes its price for a book/CD that you carry and believe will sell well during Christmas, will you follow suit?”	0	0	2	5	0	3,71
NB. Only seven out of ten Internet-based retailers answered the questions. Netbokhandeln.se for example had a policy to not discuss anything concerning their price setting.						

Table IV. Questions asked to Internet-based retailers.

4.2.2 Analysis and empirical results

The calculation, seen in *Appendix L*, shows that the standard deviation for conventional retailers is SEK 14,6 and SEK 20,8 for Internet-based retail for books and CDs, i.e. not

²⁵ International Standard Book Number

²⁶ Internet: <http://www.isbn.spk-berlin.de/html/whatis.htm> 2005-10-15

zero, i.e. representing the existence of some kind of price-maker features for both markets. Interesting to note is that the standard deviation for conventional retailers returns the lower value, indicating that this market is more in line with the criterion, whereas one might think that the Internet-based market should return the lower value as comparing prices on the Internet has lower *shoe leather* costs.

In both questions regarding the sellers' tendency to follow suit, it can be clearly seen that the Internet-based retailers felt more of a need to match competitor's movements than the conventional retailers did. This sets us up with a situation where it seems that the Internet-based retailers feel that they are in a more competitive market than the conventional retailers, but at the same time price data shows that the more competitive market seems to be the conventional market. This could well be a topic for a study of psychological effects on economics, however this lies outside the scope of this essay.

Another explanation of the lower standard deviation of the conventional retailers could be that the Internet-based retailers can buy larger quantities and can therefore have more flexible prices due to higher margins and bargaining power. The relatively small conventional retailers buy smaller quantities of a title and thereby pay a higher unit price. The consequence of this is that the conventional retailers can only move their price within a smaller boundary.²⁷

A final explanation to the lower standard deviation of the conventional retailers could be that it is easier and quicker for an Internet-based retailer to change its prices. All they have to do is click a button, whereas the conventional retailer must reprint labels. These so-called *menu costs* can in fact explain why the Internet-based retailer both has a higher standard deviation and is more wary of its competitors' movements.

RESULT:

The conventional market has lower standard deviation, indicating that the hypothesis does not hold. However, the Internet-based retailers are more likely to change their prices due to the market forces, indicating that the hypothesis does hold. Hence, the second criterion does not provide sufficient information to reject or confirm the hypothesis.

²⁷ After interview with Per Boman, Marketing manager at Internet-based retailer ginza.se

4.3 No barriers of entry/exit

4.3.1 Presentation of data

Retailers expressed the following main points. In **Table V** an analysis of whether the mentioned points are barriers is also presented.

Question	Conventional retailers	Internet-based retailers
Store location <i>When starting up a conventional retailer, how difficult is it to get a well-placed store location and how significant are the store costs?</i>	<ul style="list-style-type: none"> • Difficult and expensive • Location is decisive of amount of business • Popular locations are sought after • Low turnover of prime locations • Large start-up costs • Ongoing costs are manageable Conclusion: => Barrier	<ul style="list-style-type: none"> • N/A
Store location <i>When starting up an Internet-based retailer, how difficult is it to obtain the necessary infrastructure?</i>	<ul style="list-style-type: none"> • N/A 	<ul style="list-style-type: none"> • Not a large problem • Important to have a good website name, but not decisive of business Conclusion=> not barrier
Warehouse <i>How significant are your warehouse costs?</i>	<ul style="list-style-type: none"> • Warehouses need to be in close proximity to, or even in, prime store locations making them expensive • Often size is limited. Expansion in prime store locations is difficult Conclusion => Barrier	<ul style="list-style-type: none"> • Warehouses can be located where real estate is cheap • Expandable to fit demand • The warehouse can be eliminated altogether • Large warehouses are expensive to build Conclusion => Not Barrier
Advertisement <i>How large are your advertisement costs i)Initially? ii)On-going?</i>	<ul style="list-style-type: none"> • i) Low. The location is advertisement enough • ii) Low Conclusion => Not Barrier	<ul style="list-style-type: none"> • i) High. Internet presence is not advertisement in itself • ii) Low. Bokus.se spends less than 1% of yearly turnover on advertisement Conclusion => Barrier
Bureaucracy and administration <i>How difficult is it overcome bureaucratic obstacles when starting a retail store?</i>	<ul style="list-style-type: none"> • Not a problem Conclusion => Not Barrier	<ul style="list-style-type: none"> • Not a problem Conclusion => Not Barrier

Table V. Questions asked to Conventional and Internet-based retailers.

4.3.2 Analysis and empirical results

As seen above, there are some fundamental differences between the two markets.

Regarding store locations, conventional retailers expressed difficulties, both financial and the access to important prime store locations, which are important for the business to run. The retailers regarded this as a barrier. The Internet-based retailers on the other hand did not at all express the same concerns about the initial infrastructure that is needed to start up business. A fully managed Internet site can be easily rented without sunk costs. They did not regard the infrastructure as a barrier.

Regarding warehouse costs, the advantages of the Internet-based retailer is that warehousing is expensive, sought after inner-city locations is not needed. In fact, Bokus.se does not have any warehouse at all. They use 'cross-docking', which means that the retailer does not hold or even own books, but act as the agent for publishers.²⁸ Another strategy that Internet-based retailers use is to locate warehouses in rural areas where real estate is cheaper. For example, the Internet retailer ginza.se is located in a tiny village in the forests of Västergötaland, Sweden. The reduced real estate costs more than cover the increased transport costs. The conclusion is that conventional retailers consider warehousing a barrier of entry whereas Internet-based retailers do not

A barrier that Internet-based retailers spoke of is advertising. It is a large, initial and sunk cost that must be borne for the business to start. Conventional retailers did not see this problem, as their location was initial advertisement enough. However, the Internet-based retailer's advertisements quickly fall as is shown by Bokus.se, which had great expenditure on advertisement when they engaged the market, but this has over time reduced to less than 1% of turnover.²⁹

None of the investigated markets considered bureaucracy and patents a barrier for entry on the market.

Both types of market players indicated that exit barriers were few and easily forced. The main exit barrier mentioned was the cost of quickly getting rid of stocks. This perhaps pointing towards that the Internet-based retailers can more easily exit the market.

RESULT:

Overall, as shown in the data above and objectively judged during the interviews, there seems to be more barriers to entry/exit for conventional retailers, implying that the hypothesis holds for the third criterion.

²⁸ After interview with Märta Wallin, employee at bokus.se

²⁹ *ibid.*

4.4 Perfect knowledge

4.4.1 Presentation of data

In a perfect competitive market, both buyers and sellers are supposed to have perfect knowledge. The buyers were asked three statements, both on Internet-based and on the conventional market. The results are shown below.

Conventional Book and CD buyers						
Not Agree/Agree (1-5)	1	2	3	4	5	Average
"I know, or can easily find out, all places I can buy books/CDs stores in Malmö"	9	12	6	2	1	2,13
"I know the general price level"	2	6	14	5	3	3,03
"I know where it is cheapest to buy"	3	4	11	7	5	3,22

Table VI. Questions asked to conventional buyers

Internet Book and CD buyers						
Not Agree/Agree (1-5)	1	2	3	4	5	Average
"I know, or can easily find out, all Swedish Internet book/CD retailers"	0	2	4	12	12	4,13
"I know the general price level"	1	5	8	14	2	3,37
"I know where it is cheapest to buy"	1	1	5	16	7	3,9

Table VII. Questions asked to Internet buyers

During the research some comments were worth notifying:

Comment	Source
"Since there are so many book shops in Malmö you can walk around and check the prices, especially today when the weather is good"	Female, 28
"It is easier to find the book with the cheapest price on Internet, it is easier to check"	Male, 32
"On the Internet you are only a couple of letters away from the next store, while in Malmö you must walk or drive around to find the next store."	Male 45

Table VIII. Comments recorded during investigation

The sellers had two statements to consider:

Conventional Book and CD sellers						
Not Agree/Agree (1-5)	1	2	3	4	5	Average
"We are regularly keeping track of our competitors' prices"	1	3	1	2	0	3
"We know what price level the consumers are expecting"	0	4	2	1	0	2,57

Table IX. Questions asked to conventional sellers

Internet Book and CD sellers						
Not Agree/Agree (1-5)	1	2	3	4	5	Average
"We are regularly keeping track of our competitors' prices"	0	0	0	4	3	4,43
"We know what price level the consumers are expecting"	0	0	2	4	1	3,86

Table X. Questions asked to Internet-based sellers

During the research, some interesting comments were brought up:

Comment	Source
"People are real stingy, and could drive miles, only to save ten crowns"	Owner of Malmö

	Skivhandel
<i>"We keep track of the firms that we consider as our competitors, however the method is secret"</i>	Employee at Bokus.se
<i>"The consumers' sensitivity towards prices is different for different consumers. People looking for a crappy hit music single are very price sensitive and people looking for a rare operetta are not so sensitive"</i>	Director of Folk å Rock
<i>"We check our competitors' prices on a daily basis"</i>	Marketing manager at ginza.se

Table XI. Comments recorded during investigation

4.4.2 Analysis and empirical results

For all the questions, the Internet-based customers believed that they had better information about the market, indicating that the Internet-based market is the one that best matches the criterion.

One reason why the buyers on the Internet know where it is cheapest to buy could be the simplicity to check prices on the Internet compared to the physically moving in the city. On the Internet there are also specially designed Internet-sites that enable you to compare prices³⁰ for the products on-line, this contributes to better knowledge.

The sellers had to answer two statements, concerning competitors and buyers. The average answer was higher for both statements on the Internet. For the first question, the average Internet answer was 4.43, while it was only 3 on the conventional market. When it came to the question of the price level that the consumers expected, the average answer in the Internet was 3.86 and only 2.57 on the conventional. Per Bohman at ginza.se, said that they checked their competitors' prices on a daily basis, since they know that the consumers knew the average price level. They said that they needed to keep track in order to be able to adjust prices so that they would not lose any potential customers. Also bokus.se kept an eye on their competitors.

RESULT:

The conclusion drawn from the Internet has better perfect knowledge. The ability to check prices and market players is very simple on the Internet, it is a privilege that does not exist on the conventional market. The sellers on the Internet also claim that they experience more competition and check competitors' prices on a daily basis to be able to adjust their own. The outcome of the fourth and final criterion is that the hypothesis holds.

³⁰ Example of this: www.pricerunner.se and www.bokfynd.nu

5 Conclusion

This essay has tried to guide the reader through the comparison of the four main criteria of the Theory of Perfect Competition and that of features of two market places, the Internet-based and the conventional retail market for books and CDs.

Furthermore this essay set up a hypothesis that said that the Internet-based market fulfils the four main criteria better.

For the first criterion, Homogeneous goods, the result is that the hypothesis cannot be rejected as the goods in the two markets are identical and homogeneous.

For the second criterion, Many buyers/sellers, the investigation showed that the conventional market has lower price standard deviation, indicating that the hypothesis does not hold. However, the Internet-based retailers are more likely to change their prices due to actions of market players, indicating that the hypothesis does hold. An unambiguous conclusion can, therefore not be reached. The hypothesis can still not be rejected.

In the third criterion, no barriers of entry/exit, the Internet-based retailers showed the least concern over barriers and therefore the investigation of the third criterion supports the hypothesis.

In investigating the fourth and final criterion, Perfect knowledge, the Internet-based market seems to be the one that has the most perfect information and the investigation supports the hypothesis.

In summary, the hypothesis cannot be rejected, as only two out of four of the main criteria did not support the hypothesis. However, when disregarding the first criterion, where no comparison of the two markets was possible, the hypothesis holds, supported by two out of three criteria.

The answer to the research question is that Internet-based retail of books and CDs best fulfils the main criteria of the perfectly competitive market structure (perfect competition theory).

Further investigations could be carried out to find out if competition has affected and lowered prices.

6 Evaluation and errors

When analysing the collected material it is important to minimise random uncertainties. One way to minimise uncertainties is to increase the sample size. More price information could have been gathered and more interviews could have been conducted.

An error occurring when choosing customers is the possible attachment between buyers and sellers. Certain consumers select their retailers upon social reasons as well as geographical.

Also the validity of the consumers on the Internet can be questioned. This essay accepts that a more correct method would be to contact consumers that are about to or have recently purchased a book on the Internet. However, due to secrecy the Internet-based retailers were reluctant to supply necessary information.

A distorting factor that must be taken into consideration is the fact that access to the two markets may vary considerably for different consumers. E.g. for some of the questioned consumers, getting on to the Internet may be more difficult (even impossible) than physically travelling to a store, or vice versa.

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7.2 Papers

Brynjolfsson, Erik and Smith, Michael D (2000), "Frictionless Commerce? A comparison of Internet and Conventional Retailers," MIT Sloan School of Management, 50 Memorial Drive, Cambridge Massachusetts 02139

7.3 Internet

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<http://www.billboard.com/billboard/charts/bb200.jsp>

Bokfynd:

www.bokfynd.nu

Business Step:

<http://www.businesssteps.co.uk/BusNet/Demand/Compete/c050a.htm>

ISBN:

<http://www.isbn.spk-berlin.de/html/whatis.htm>

OKI:

<http://www.oki.com/en/otr/html/nf/otr-183-02-3.html>

One to one:

<http://www.121.nu/infosid/handel2.htm#bocke>.

Pricerunner:

www.pricerunner.se

SCB:

<http://www.scb.se/publkat/transporter/it/it.pdf>

Swedish Royal Library:

<http://www.kb.se/intboksv.htm>

Voorheesville Central School:

<http://vcsd.neric.org/distancelearning/Ch23notes/sld053.htm>

Yahoo:

<http://education.yahoo.com/reference/dictionary/>

Yellow Pages:

http://www.gulasidorna.se/query?what=yp&newSearch=1&searchRadio=simple&heading=bokhandlare&company_name=&geo_area=malm%F6&dir_area=&x=0&y=0

Yellow Pages:

http://www.gulasidorna.se/query?what=yp&heading_exact=Musik+-+CD,+skivor,+kassettband++Detaljister&district_name=&district_type=&geo_area=malm%F6

8 Appendix

8.1 Appendix A - Definitions

Concept	Explanation	Source
Conventional retailers	Retailers that have primarily conduct sales through the conventional retail market.	Own
Conventional retail market	A market where buyers and sellers physically meet.	Own
Deductive approach	An approach based on reasoning.	The Oxford guide to the English language p.310
E-commerce	The technology, processing, and operations that occur when business transactions are done automatically over networks, using information technology.	http://www.oki.com/en/otr/html/nf/otr-183-02-3.html
Inductive approach	An approach based on observed examples.	The Oxford guide to the English language p.382
Internet	An interconnected system of networks that connects computers around the world via the TCP/IP protocol	http://education.yahoo.com/reference/dictionary/
Internet-based market	A market that is located on the Internet.	Own
Internet-based retailer	Retailers that have primarily conduct sales on the Internet.	Own
ISBN	The ISBN (International Standard Book Number) is a unique machine-readable identification number, which marks any book unmistakably.	http://www.isbn.spk-berlin.de/html/whatis.htm
Menu costs	Refers to the need for firms to change price lists frequently. (literally reprinting menus in restaurants).	Glanville, <u>Economics from a global perspective</u> p.265
Perfectly competitive market	A market that possesses four main characteristics: many buyers/sellers, no barriers of entry/exit, perfect knowledge and homogenous products.	Anderton, <u>Economics Second Edition</u> p.149
Price-maker	Firms are price makers if they can influence the market price by changing the quantity they sell.	http://vcsd.neric.org/distancelearning/Ch23notes/sld053.htm
Price-taker	Changes in output by one firm do not do not shift the industry supply curve sufficiently to alter price.	Oxford Revision Guides p.35
Shoe leather costs	Refer sto time and real capital costs of keeping informed about price changes. (literally walking from shop to shop to compare prices).	Glanville, <u>Economics from a global perspective</u> p.265
Sunk cost	‘Sunk costs’ are investments that are not recoverable if a firm chooses to leave the market.	Anderton p.138
Theory of Perfect Competition	A market where there is a high degree of competition	Anderton, <u>Economics Second Edition</u> p. 149

8.2 Appendix B - Standard deviation

$$\sqrt{\frac{n \sum x^2 - (\sum x)^2}{n(n-1)}}$$

8.3 Appendix C – Inquiry buyers

Inquiry for Extended Essay

Age:

Sex:

1: Agree entirely

5: Do not agree

I buy where it is cheapest:

1 2 3 4 5

I know the general price level:

1 2 3 4 5

I know where it is cheapest to buy:

1 2 3 4 5

How many percent of your book/CD buy are done through the Internet?

None Quarter Half Three Quarter Almost everything

8.4 Appendix D – Inquiry sellers

Inquiry to Extended Essay

Company:

1: Agree entirely

5: Do not agree

If one of the larger stores, which you consider a competitor, changes its price for a book/CD that you carry and believe will sell well during Christmas, will you follow suit?

1 2 3 4 5

If three or more of the larger stores, which you consider as competitors, changes its prices for a book/CD that you carry and believe will sell well during Christmas, will you follow suit?

1 2 3 4 5

We are regularly keeping track of our competitors' prices:

1 2 3 4 5

We know what price level the consumers are expecting:

1 2 3 4 5

8.5 Appendix E – Standard interview questionnaire regarding Barriers of entry/exit

For conventional retailer

- 1) Store location
When starting up a conventional retailer, how difficult is it to get a well placed store location and how significant are the store costs?
- 2) Warehouse
How significant are your warehouse costs?
- 3) Advertisement
How large your advertisement costs i) Initially? ii) On-going?
- 4) Bureaucracy and administration
How difficult is it to overcome bureaucratic obstacles when starting a conventional retail store?

For Internet-based retailer

- 1) Store location
When starting up an Internet-based retailer, how difficult is it to obtain the necessary infrastructure?
- 2) Warehouse
How significant are your warehouse costs?
- 3) Advertisement
How large your advertisement costs i) Initially? ii) On-going?
- 4) Bureaucracy and administration
How difficult is it to overcome bureaucratic obstacles when starting an Internet-based retailer?

8.6 Appendix F – Book and CD retailers

Conventional retailers for books	Conventional retailers for CDs
Akademibokhandeln	Lazer Musik
Hamrelus bokhandel	Skivhuset i Malmö
Malmö Bokhandel	Ahlens
Bokia	ROCKS
	Folk o Rock

Internet-based retailers for books	Internet-based retailers for CDs
Internetbokhandeln.se	Ginza.se
Bokus.se	Bengans.se
Akademibokhandeln.se	Skivhugget.se
Netbokhandeln.se	Ahlens.com
Ahlens.com	Cdon.se

8.7 Appendix G – CD Titles

CDs
Red Hot Chilli Peppers-By the way
Bruce Springsteen - The rising
Def Leppard – X
Eminem - The Eminem show
Shakira - Laundry service
Shania Twain - Up!
Eminem - 8 mile
Snoop Dogg - Paid tha cost to be tha Bo\$\$
2pac - Better dayz
Jennifer Lopez - This is me...Then
Faith Hill – Cry
Ja Rule - The last temptation
Avril - Lavigne - Let go
Christina Aguilera - Stripped
Tim McGraw & the dancehall doctors
Aqua – aquarium
Celine Dion - Let's talk about love
Metallica - Re-load
Shania Twain – Come on Over
Boys II Men – Evoulution
RHCP – Californication
Spice Girls – Spice
Dr. Dre – Chronic
Rolling Stones - Rolling Stones
Elvis Prestley - Greatest Hits Live

8.8 Appendix H – Book titles

Books
Hornby, Nick - About a boy
Rowling, J.K - Harry Potter and the goblet of fire
Walters, Minette - Acid Row
Hornby, Nick - How to be good
Keyes, Marian – Angels
Dickens, Charles - Oliver Twist
Austin, Jane - Sense and sensibility
Wild, Oscar - Picture of Dorian Gray
Cristie, Agata - Death on the Nile
Shakespeare, William – Macbeth

8.9 Appendix I – Prices for books, conventional and internet

Internet for books	Netbokhandeln.se	Akademibokhandeln.se	Bokus.se	Adlibris.se	Internetbokhandeln.se
Hornby, Nick - About a boy	79	97	140	81	86
Rowling, J.K - Harry Potter	101	142	140	91	119
Walters, Minette - Acid Row	152	92	140	143	143
Hornby, Nick - How to be good	89	118	140	81	86
Keyes, Marian – Angels	123	159	275	115	284
Dickens, Charles – Oliver Twist	30	25	41	27	118
Austin, Jane - Sense and sensibility		80	46	27	
Wild, Oscar - Picture of Dorian Gray	35	25	46		27
Cristie, Agata - Death on the Nile	83	92	98	73	27
Shakespeare, William - Macbeth	30	25	41	24	46

Conventional for books	Akademibokhandeln	Malmö Bokhandel	HameliusBokhandel	Bokia
Hornby, Nick - About a boy	97	124	109	126
Rowling, J.K - Harry Potter	139	163	168	142
Walters, Minette - Acid Row	118		109	117
Hornby, Nick - How to be good	118	124	109	126
Keyes, Marian – Angels	199	219	378	176
Dickens, Charles - Oliver Twist	25	32	30	29,5
Austin, Jane - Sense and sensibility	25	32	30	29,5
Wild, Oscar - Picture of Dorian Gray	25	32	30	29,5
Cristie, Agata - Death on the Nile	92			109
Shakespeare, William - Macbeth	19	32	30	29,5

8.10 Appendix J – Prices for CDs, conventional and internet

Internet for CD	ginza.se	bengas.se	ahLens.com	skivhugget.se	cdon.se
Red Hot Chilli Peppers-By the way	159	169	159	169	139
Bruce Springsteen - The rising	159	159	139	169	139
Def Leppard – X	159	159	149	169	139
Eminem - The Eminem show	159	169	149	169	149
Shakira - Laundry service	159	159	149	139	139
Shania Twain - Up!	189	179	179	188	169
Eminem - 8 mile	169	169	179	169	149
Snoop Dogg - Paid tha cost to be tha Bo\$\$	159	169	159	169	149
2pac - Better dayz	159		159	199	199
Jennifer Lopez - This is me...Then	159	169	149	169	149
Faith Hill – Cry	159	169	159	169	149
Ja Rule - The last temptation	159	159	149	169	149
Avril - Lavigne - Let go	159	139	129	169	149
Christina Aguilera – Stripped	159	169	159	169	149
Tim McGraw & the dancehall doctors	159		179		159
The Beatles – Help	159	169	149	169	169
Spice Girls – Spice	79	179	149	169	159
Dr. Dre – Chronic	159	89	139	179	159
Rolling Stones - Rolling Stones	159	169	149	179	149
Elvis Prestley - Greatest Hits Live	99	159	149	179	149
Aqua – aquarium	79	159	149	99	79
Celine Dion - Let's talk about love	159	169	149	169	149
Metallica - Re-load	159	159	149	169	149
Shania Twain - Come on Over	99	99	149	169	149
Boys II Men – Evoulution	49	169	149	99	79
	145	146	153	159	147

8.11 Appendix K – Calculation of Standard Deviation

CD titles	Lazer Musik	Skivhuset	Åhlens	ROCKS	Folk à Rock
Red Hot Chili Peppers-By the way	199	179	185	199	199
Bruce Springsteen - The rising	199	179	179	159	179
Def Leppard – X	199	179	198	199	199
Eminem - The Eminem show	199	179	205	179	179
Shakira - Laundry service	199	179	169	189	169
Shania Twain - Up!	199	199	209	159	199
Eminem - 8 mile	199	199	205	179	199
Snoop Dogg - Paid tha cost to be tha Bo\$\$	199	189	189	199	199
2pac - Better dayz	199	229	189	179	239
Jennifer Lopez - This is me...Then	199	179	179	179	199
Faith Hill – Cry	199	179	185	189	199
Ja Rule - The last temptation	199	179	198	179	199
Avril - Lavigne - Let go	199	179	179	165	149
Christina Aguilera – Stripped	199	179	209	179	199
Tim McGraw & the dancehall doctors	199	-	189	199	199
The Beatles – Help	239	189	189	199	219
Spice Girls - Spice - slow runner	209	189	189	159	189
Dr. Dre – Chronic	199	169	195	199	199
Rolling Stones - Rolling Stones	199	189	189	179	119
Elvis Presley - Greatest Hits Live	199	189	189	189	189
Aqua – aquarium	199	-	189	199	199
Celine Dion - Let's talk about love	199	189	189	199	199
Metallica - Re-load	199	189	189	199	199
Shania Twain - Come on Over	199	199	195	199	199
Boys II Men – Evoulution	199	99	189	199	199

8.12 Appendix L – Average Standard deviation

Standard deviation	Internet	Conventional
Red Hot Chili Peppers-By the way	12,247	9,5499
Bruce Springsteen - The rising	13,416	14,142
Def Leppard - X	11,402	8,8431
Eminem - The Eminem show	10	12,775
Shakira - Laundry service	10	13,038
Shania Twain - Up!	8,1363	19,494
Eminem - 8 mile	10,954	9,9599
Snoop Dogg - Paid tha cost to be tha Bo\$\$	8,3666	5,4772
2pac - Better dayz	23,094	25,884
Jennifer Lopez - This is me...Then	10	10,954
Faith Hill - Cry	8,3666	8,7864
Ja Rule - The last temptation	8,3666	10,78
Avril - Lavigne - Let go	15,811	18,58
Christina Aguilera - Stripped	8,3666	13,416
Tim McGraw & the dancehall doctors	11,547	5
The Beatles - Help	8,9443	21,679
Spice Girls - Spice	39,623	17,889
Dr. Dre - Chronic	34,351	13,084
Rolling Stones - Rolling Stones	13,038	32,094
Elvis Presley - Greatest Hits Live	29,496	4,4721
Aqua - aquarium	38,471	5
Celine Dion - Let's talk about love	10	5,4772
Metallica - Re-load	8,3666	5,4772
Shania Twain - Come on Over	32,094	1,7889
Boys II Men - Evoulution	49,497	43,818
Hornby, Nick - About a boy	25,245	13,638
Rowling, J.K - Harry Potter	22,788	14,629
Walters, Minette - Acid Row	23,906	4,9329
Hornby, Nick - How to be good	25,312	7,6322
Keyes, Marian - Angels	82,354	91,699
Dickens, Charles - Oliver Twist	39,506	2,9545
Austin, Jane - Sense and sensebility	26,851	2,9545
Wild, Oscar - Picture of Dorian Gray	9,535	2,9545
Cristie, Agata - Death on the Nile	28,237	12,021
Shakespeare, William - Macbeth	9,8336	5,8506
	20,8	14,2

8.13 Appendix M – Chat communties

Site	Internetadress
Passagen	http://chat.passagen.se/
Everyday	http://www.chat.everyday.com/
Aftonbladet	http://chat.aftonbladet.se/